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United States Patent [19]**Carpenter et al.**[11] **Patent Number:** **5,786,342**[45] **Date of Patent:** **Jul. 28, 1998**[54] **USES OF ALOE PRODUCTS IN THE
TREATMENT OF CHRONIC RESPIRATORY
DISEASES**[75] **Inventors:** **Robert H. Carpenter**, Bastrop; **Harley
R. McDaniel**, Dallas; **Bill H.
McAnalley**, Grand Prairie, all of Tex.[73] **Assignee:** **Carrington Laboratories, Inc.**, Irving,
Tex.[21] **Appl. No.:** **462,821**[22] **Filed:** **Jun. 5, 1995****Related U.S. Application Data**

[62] Division of Ser. No. 159,830, Dec. 1, 1993, Pat. No. 5,441,943, which is a division of Ser. No. 864,583, Apr. 7, 1992, Pat. No. 5,308,838, which is a division of Ser. No. 558,905, Jul. 27, 1990, Pat. No. 5,118,673, which is a continuation-in-part of Ser. No. 229,164, Aug. 5, 1988, Pat. No. 5,106,616, which is a continuation-in-part of Ser. No. 144,872, Jan. 14, 1988, Pat. No. 4,851,224, which is a continuation-in-part of Ser. No. 869,261, Jun. 5, 1986, Pat. No. 4,735,935, which is a continuation-in-part of Ser. No. 810,025, Dec. 17, 1985, abandoned, which is a continuation-in-part of Ser. No. 754,859, Jul. 12, 1985, abandoned, which is a continuation-in-part of Ser. No. 750,321, Jun. 28, 1985, abandoned, which is a continuation-in-part of Ser. No. 649,967, Sep. 12, 1984, abandoned, which is a continuation of Ser. No. 375,720, May 7, 1982, abandoned.

[51] **Int. Cl.⁶** **A61K 31/715; C08B 37/00**[52] **U.S. Cl.** **514/54; 514/826; 536/123;
536/123.1**[58] **Field of Search** **514/54, 826; 536/123.1,
536/123**[56] **References Cited****U.S. PATENT DOCUMENTS**

4,735,935	4/1988	McAnalley	514/53
4,851,224	7/1989	McAnalley	424/195.1
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Primary Examiner—John Kight*Assistant Examiner*—Howard C. Lee*Attorney, Agent, or Firm*—Hitt Chwang & Gaines, PC[57] **ABSTRACT**

Acemannan has been shown to be effective in treating a number of conditions where the principal mechanism of resolution or cure requires intervention by the patient's immune system. Acemannan has direct stimulatory effects on the immune system. Methods for treating cancer, viral diseases, respiratory and immune regulatory diseases, inflammations, infections and infestations by administering an acetylated mannan derivative, such as acemannan derived from aloe, are described. The method finds use in tissue cultures, animals and plants.

3 Claims, 2 Drawing Sheets